

U.S. Pat. No. 5,020,798

U.S. Pat. No. 4,772,241

U.S. Pat. No. 2,897,066 "

to:

"—Other patents illustrative of the art include

U.S. Pat. No. 5,020,798

U.S. Pat. No. 4,772,241

U.S. Pat. No. 2,897,066

U.S. Pat. No. 2003/0032364 A1

U.S. Pat. No. 2003/0022586 A1

U.S. Pat. No. 2002/0017759

U.S. Pat. No. 6,533,636 B2

U.S. Pat. No. 5,755,608"

Page 4, paragraph 0013, change:

"Upon review it is seen that the present invention differs from prior art relating to toy tops and is unique in multiple respects. Additionally, an unclaimed advantage of the present invention over said prior art lies in its manufacturing. All top spindle, spinning tip and grip stem claims allow the articles to be made complete on a standard lathe or screw machine with no secondary operations. Additionally, the invention is specifically designed to be used with a rotational inertia member in the form of a compact disc which the consumer can often obtain for free or at minimal cost. Also, due to the fact that compact discs are required to be manufactured to precise industry standards to control uniformity in rotational inertia and physical dimensions, the spindle may be offered alone with no particular hindrance to the ability of the user to create an assembled toy top."

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stem claims allow the articles to be made complete on a standard lathe or screw machine with no secondary operations. Additionally, the invention is specifically designed to be used with a rotational inertia member in the form of a compact disc which the consumer can often obtain for free or at minimal cost. In this respect, the invention allows compact discs mailed to the home or otherwise obtained to be made useful. Also, due to the fact that compact discs are required to be manufactured to precise industry standards to control uniformity in rotational inertia and physical dimensions, the spindle may be offered alone with no particular hindrance to the ability of the user to create an assembled toy top. "

Page 5, paragraph 0016, change:

"Another object is to meet the above objective such that the appeal of the affixed label as a part of the top assembly renders it and the associated compact disc, with or without digital information encoded upon it, more likely to be retained rather than simply thrown away as standard advertising literature and informational compact discs often are."

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"—Another object is to meet the above objective such that the appeal of the affixed label as a part of the top assembly renders it and the associated compact disc, with or without digital information encoded upon it to be made useful, thus more likely to be retained rather than simply thrown away as standard advertising literature and informational compact discs often are. "

Page 6, paragraph 0029, change:

"Figure 3 illustrates two embodiments of the top spindle 1 which integrates a spinning tip 6, a threaded cylinder 7, a locating hub 9, a bearing platform 10 and a gripping stem 8 all into one piece. The spinning tip 6 is shown as terminating in a point, however, it may also be a round spherical shape 36 or a generally round feature 35 such as a parabola as depicted in figure 5. The point or rounded feature of the spinning tip serves to minimize contact of the toy top 3 with a spinning surface in order to reduce frictional losses that would create a shorter spinning duration. A nut 14, threaded boss 30, o-ring 15, or washer 16 may all be

used in place of or in conjunction with the bearing platform 10 to form a shoulder pair by which to clamp a compact disc rigidly to the top spindle 1. Figure 3 depicts the threaded cylinder 7 being axially adjacent, below in one embodiment and above in the other, the bearing platform 10. The exemplary embodiments shown allow the compact disc to be assembled onto the top spindle 1 from either the spinning tip 6 side or the gripping stem 8 side. The bearing platform 10 provides a flanged surface that the compact disc may be clamped against in the toy top assembly 3. The integral gripping stem 8 has on its upper end a spinning knob 12 which contains grasping features 13 to enable the user to spin the top more uniformly and at a higher angular rate of speed. These features generally increase contact friction with the users twirling fingers and can include knurled 17, upset 18, machined 19, adhesive 20, grooved 21 or embedded aggregate 22 as shown in figure 4. The adhesive gripping feature 20 may be in the form of a tacky or rubber like applied coating. The embedded aggregate 22 may be in the form of an adhesive type base in which particles such as silicon carbide are embedded to increase gripping friction. The spindle may be constructed of any number of materials including brass, steel, aluminum, wood or plastic. The symmetrical design of the spindle allows it to be manufactured in its entirety on a simple lathe."

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the compact disc to be assembled onto the top spindle 1 from either the spinning tip 6 side or the gripping stem 8 side. The bearing platform 10 provides a flanged surface that the compact disc may be clamped against in the toy top assembly 3. The integral gripping stem 8 has on its upper end a spinning knob 12 which contains grasping features 13 to enable the user to spin the top more uniformly and at a higher angular rate of speed. These features generally increase contact friction with the users twirling fingers and can include knurled 17, upset 18, machined 19, adhesive 20, grooved 21 or embedded aggregate 22 as shown in figure 4. The adhesive gripping feature 20 may be in the form of a tacky or rubber like applied coating. The embedded aggregate 22 may be in the form of an adhesive type base in which particles such as silicon carbide are embedded to increase gripping friction. The spindle may be constructed of any number of materials including brass, steel, aluminum, wood or plastic. The symmetrical design of the spindle allows it to be manufactured in its entirety on a simple lathe. "

Page 8, paragraph 0032, change:

"Figure 6 illustrates an alternate application of the toy top assembly 3 when it is held inverted on a horizontal plane. The spinning tip, 6 if integral or 32 if discrete, will cast a shadow 42 on the rotational inertia member 2 surface when exposed to a light source originating from a position above the plane of the rotational inertia member 2. The sun, as a light source itself, moves in an arcuate path 37 relative to a stationary earth position during the course of a day and will have a varying declination during the course of the year. Arcuate path 37 represents a winter month and arcuate path 38 represents a summer month for an observer in earth's northern hemisphere. During the course of a day the sun will continuously move from 39 to 40 to 41 relative to the observer. These discrete positions might represent morning, noon and evening respectively. On the surface of the rotational inertia member 2, an arcuate curvilinear form 44 which follows the path traced by the tip of the spinning tip 6 or 32 during the course of a day allows the observer to rotationally align the inverted toy top assembly 3 to a deterministic position relative to earth. By aligning the shadow from the spinning tip 6 or 32, the user may thereby orient him or